

Supplementary Materials for

Morton, T.A. & Salvatore, J. (2026). When it doesn't get better: Leaning into minoritized identity to brace for decline. *advances.in/psychology*, 1, e186113.

<https://doi.org/10.56296/aip00056>

SOM #1: Details of gender coding

SOM #2: Details of individual items and scale reliabilities

SOM #3: Experimental manipulations and related results

SOM #4: Analytic code

SOM#5: Correlation matrices at each timepoint

SOM#6: Parameter Estimates for Sequential Mediation Model

SOM #1: Details of gender coding

In the first and second waves, we included only four gender categories, as shown in Table SOM 1-1. In the remaining waves we added three additional gender category options, as shown in Table SOM 1-2. To ensure that interpretability is clear, we provide below the frequencies for each code. Note that analyses reported in the main text control for gender identity contrasting code 1 (i.e., “male” in the first two waves and “cis male” in the remaining waves) with all other codes.

Table SOM 1-1

Gender breakdown for first two waves, as can be seen in the “Gender_earlierwaves” variable in data file on OSF

	2017 wave	2019 wave
Male (coded 1)	65	129
Female (coded 2)	104	321
Other (coded 3)	10	37
Prefer not to answer (coded 4)	0	2

Note. After exclusion of those who self-described as non-LGBTQ+ and/or non-Western (see main text).

Table SOM 1-2

Gender breakdown for final three waves, as can be seen in the “Gender_laterwaves” variable in data file on OSF

	2020 wave	2021 wave	2025 wave
Cis male (coded 1)	244	152	307
Cis female (coded 2)	542	673	487
Other (coded 3)	37	22	23
Prefer not to answer (coded 4)	10	9	9
Trans male (coded 5)	38	21	28
Trans female (coded 6)	15	10	42

Non-binary (coded 7)

110

103

74

Note. After exclusion of those who self-described as non-LGBTQ+ and/or non-Western (see main text).

SOM #2: Details of individual items and scale reliabilities

Table SOM 2-1

Wording of individual items comprising different measures in the common dataset, as well as composite scale reliabilities (Cronbach's alpha) at each wave.

<u>Identification</u>					
• I feel a bond with the LGBTQ+ community • I feel solidarity with the LGBTQ+ community • I feel committed to the LGBTQ+ community • I often think about the fact that I am a member of the LGBTQ+ community • The fact that I am a member of the LGBTQ+ community is an important part of my identity • Being a member of the LGBTQ+ community is an important part of how I see myself					
Reliability	2017: .93	2019: .92	2020: .92	2021: .92	2025: .94
<u>Perceptions of the possibility of progressive (social) change</u>					
• The position of sexual minorities in society has improved significantly • Sexual minorities have become more equal with the heterosexual majority • Full equality for sexual minorities within broader society is achievable within the not too distant future • Sexual minorities still have a long way to go before they achieve full equality with the heterosexual majority (reversed-coded)					
Reliability	2017: .79	2019: .68	2020: .65	2021: .68	2025: .73
<u>Emotions</u>					
• Positive emotions (PE): Comfort, Contentment, Affirmation, Hope, Inspiration, Security • Negative emotions (NE): Regret, Apprehension, Concern, Sadness, Uncertainty, Worry					
Reliability (PE)	2017: .81	2019: .81	2020: .83	2021: .85	2025: .90
Reliability (NE)	2017: .87	2019: .86	2020: .83	2021: .84	2025: .83
<u>Group-Based Self-Definition</u>					
• I have a lot in common with the average LGBTQ+ person • I am similar to the average LGBTQ+ person • LGBTQ+ people have a lot in common with each other • LGBTQ+ people are very similar to each other					

Reliability	2017: .79	2019: .84	2020: .85	2021: .84	2025: .89
-------------	-----------	-----------	-----------	-----------	-----------

Group-Based Satisfaction

- I am glad to be a member of the LGBTQ+ community
- I think that the LGBTQ+ community have a lot to be proud of.
- It is pleasant to be a member of the LGBTQ+ community
- Being a member of the LGBTQ+ community gives me a good feeling.

Reliability	2017: .92	2019: .91	2020: .91	2021: .91	2025: .92
-------------	-----------	-----------	-----------	-----------	-----------

Collective Efficacy

- I am confident that the LGBTQ+ community can deal efficiently with unexpected events
- The LGBTQ+ community can remain calm when facing difficulties because we can rely on our coping abilities
- The LGBTQ+ community can always manage to solve difficult problems if we try hard enough
- When the LGBTQ+ community is confronted with a problem, we can usually find several solutions
- The LGBTQ+ community can usually handle whatever comes our way

Reliability	2017: .92	2019: .92	2020: .92	2021: .93	2022: .92
-------------	-----------	-----------	-----------	-----------	-----------

Desire to Preserve Collective Identity

- In addition to pursuing social change, it is important that the LGBTQ+ community remembers its unique histories
- In addition to pursuing social change, it is important that the LGBTQ+ community protects the unique spaces that it has inhabited in the past

Reliability	2017: .66	2019: .72	2020: .72	2021: .72	2025: .78
-------------	-----------	-----------	-----------	-----------	-----------

Desire to Relinquish Collective Identity

- In order to realise true social change, it is important that the LGBTQ+ community itself also changes
- True social change means giving up some of the things that have marked the LGBTQ+ community as different in the past
- True social change means that the LGBTQ+ community will become less relevant as a part of people's identities

Reliability	2017: .59	2019: .65	2020: .53	2021: .60	2025: .57
-------------	-----------	-----------	-----------	-----------	-----------

Desired speed of social change*

- In my opinion, social change around sexual identities is not happening fast enough. Community activists should be pushing even harder.

-
- In my opinion social change around sexual identities is happening too fast, at least in some areas. Community activists should step back a bit.
-

Note. Due to low reliability, we do not report analyses of the Relinquish scale.

*These items were part of the common set of measures but are not analyzed in this paper since they are not related to identity or to identity vigilance.

SOM #3: Experimental Manipulations and Related Results

The data we pool here were originally conceived as separate experiments in which we manipulated the salience of ingroup versus outgroup change (i.e., the focus of change(s) as located in the ingroup or the outgroup). Our expectation was that identification would interact with the change manipulation such that identification would be most straightforwardly related to the group, and the individual's membership in it, when change was portrayed as located in outgroup rather than the ingroup. When change was instead portrayed as located in ingroup, we expected the typical relationships between identification and positive identity-based outcomes to attenuate – an attenuation that we interpret as being driven by more ambivalent feelings about (even progressive) social change under these conditions. As noted in the main text, our predictions were grounded in the largely progressive social change observed prior to data collection, so the subsequent reversals guided our ultimate decision to focus on across-time changes rather than the original focal experimental effects.

The experimental design and hypotheses were pre-registered for studies 3 (2020) and 4 (2021) in this sequence:

<https://aspredicted.org/8595-xmyk.pdf>

<https://aspredicted.org/kg9x-k8f8.pdf>

For transparency and completeness, here we analyse the experimental effects across the pooled dataset.

In each experiment, participants were randomly assigned to one of three conditions:

- a control condition, in which they were prompted to reflect broadly on the changing position of sexual minorities in society;
- an ingroup change condition, in which they were prompted to think about the changing position of sexual minorities in society and how this was affecting sexual minorities themselves (e.g., their self-concepts, social relations, and geographical locations);
- or an outgroup change condition, in which they were prompted to think about the changing position of sexual minorities in society and how this was affecting the sexual *majority* (e.g., their self-concepts, social relations, and geographical preferences).

After the manipulation text (in the ingroup and outgroup conditions only), respondents were invited to provide examples of their own.

Identification was measured prior to this manipulation, whereas the other variables were measured after.

To analyse these data according to the original hypothesis, we specified a series of mixed models in which individuals were nested within samples, including random intercepts for sample. Experimental

condition, identification and their interaction were included as fixed effects. As in all analyses, age, (cis) male gender, white ethnicity, and US residence were included as controls. As can be seen in Table SOM 3-1 below, patterns across dependent variables were not consistent.

Table SOM 3-1

Condition X Identification effects across dependent measures (controlling for age, (cis) male gender, white ethnicity, and US residence)

	ID	Condition	Condition X ID
PPPC	$F = 29.41, p < .001$	$F = 0.55, p = .579$	$F = 2.95, p = .053$
PE	$F = 248.01, p < .001$	$F = 25.40, p < .001$	$F = 3.99, p = .019$
NE	$F = 72.30, p < .001$	$F = 5.34, p < .001$	$F = 0.04, p = .961$
GBSD	$F = 1874.11, p < .001$	$F = 1.03, p = .359$	$F = 1.00, p = .369$
GBS	$F = 4523.39, p < .001$	$F = 0.93, p = .393$	$F = 5.75, p = .003$
CE	$F = 1157.42, p < .001$	$F = 2.64, p = .073$	$F = 5.23, p = .005$
PrID	$F = 861.52, p < .001$	$F = 0.03, p = .972$	$F = 0.46, p = .629$

Note. PPPC = Perceived possibility of progressive (social) change, ID = Identification, PE = Positive emotion, NE = Negative emotion, GBSD = group-based self-definition, GBS = group-based satisfaction, CE = collective efficacy, PrID = preserve identity

These analyses reproduce the correlation between identification and all other identity variables (Column 1). They also reveal effects of the manipulation on emotional reactions. These measures indicated that both positive and negative emotion were lower in the outgroup change condition than the other conditions, $ps < .001$.

Of relevance to our hypotheses, Identification x Condition interactions were evident on perceived possibility of progressive change (albeit weakly), positive emotion, group satisfaction, and collective efficacy. Conditional effects of identification are reported in Table SOM 3-2 below.

Table SOM 3-2

Simple effect of identification within each condition: Coeff (SE) [95%CIs]

	Control condition	Ingroup condition	Outgroup condition
PPPC	-.04 (.02), [-.077, -.003]	-.10 (.02), [-.139, -.061]	-.05 (.02), [-.085, -.007]
PE	.19 (.02), [.161, .224]	.14 (.02), [.106, .172]	.13 (.02), [.100, .167]
GBS	.67 (.02), [.637, .697]	.61 (.02), [.578, .640]	.60 (.02), [.566, .630]
CE	.45 (.02), [.412, .489]	.36 (.02), [.319, .400]	.41 (.02), [.370, .451]

Note. PPPC = Perceived possibility of progressive (social) change, PE = Positive emotion, GBS = group-based satisfaction, CE = collective efficacy

The pattern on perceived possibility of progressive change was as predicted: Identification was most strongly negatively correlated with perceived social change when change was located in the ingroup relative to the alternative conditions (in which the effects of identification were still significant, but attenuated). A similar pattern was evident on collective efficacy: the otherwise strong link between identification and collective efficacy was attenuated after contemplating ingroup change relative to the alternative conditions.

The effects on positive emotion and group satisfaction were, however, driven by the control condition differing from the other two. When social change was left unspecified, identification linked to positive emotions and positive feelings about the ingroup more strongly than when the location change was specified more concretely, regardless of whether this was located in the ingroup or outgroup.

Importantly, there were no interactive effects on the remaining measures, contributing to the overall impression of inconsistent patterns.

Via a series of general linear models, we also checked whether the effects of our manipulation varied across waves of data collection in ways that might compromise a purely time-based analysis. As can be seen in Table SOM 3-3 below, patterns across variables were not consistent.

Table SOM 3-3

Wave X Condition effects across dependent measures (controlling for age, (cis) male gender, white ethnicity, and US residence)

	Wave	Condition	Wave X Condition
ID	$F = 37.30, p < .001$	$F = 0.60, p = .551$	$F = 1.73, p = .087$
PPPC	$F = 10.80, p < .001$	$F = 1.57, p = .208$	$F = 0.61, p = .772$
PE	$F = 3.89, p = .004$	$F = 7.51, p < .001$	$F = 4.36, p < .001$
NE	$F = 39.04, p < .001$	$F = 3.12, p = .044$	$F = 1.09, p = .370$
GBSD	$F = 75.97, p = .040$	$F = 0.36, p = .700$	$F = 1.01, p = .425$
GBS	$F = 22.01, p < .001$	$F = 0.15, p = .862$	$F = 2.17, p = .027$
CE	$F = 16.17, p < .001$	$F = 1.07, p = .342$	$F = 1.04, p = .403$
PrID	$F = 7.83, p < .001$	$F = 0.14, p = .873$	$F = 0.74, p = .658$

Note. PPPC = Perceived possibility of progressive (social) change, ID = Identification, PE = Positive emotion, NE = Negative emotion, GBSD = group-based self-definition, GBS = group-based satisfaction, CE = collective efficacy, PrID = preserve identity

These analyses reproduce the effect of wave across all variables (reported in the main text of the paper). Effects of condition emerged only on the measures of positive and negative emotions. As reported above, in both cases this was because reported emotion (positive & negative) was lower in the outgroup change condition relative to the control condition, $ps \leq .038$, with no difference between control and ingroup change conditions, $ps \geq .532$.

Of more potentially more concern, are Wave x Condition interactions observed for positive emotion and group satisfaction. In the case of positive emotion, this revealed that the previously reported difference between the outgroup change and alternative conditions was present only in the 2020 and 2021 waves, $ps < .001$ (all other $ps > .53$). In the case of group satisfaction, a difference between the outgroup condition and the control ($p = .025$) and ingroup change ($p = .043$) conditions was present only in the 2020 wave (all other $ps > .230$). In this case positive feelings about the group were higher in the outgroup change condition relative to the control condition. Again, this gives the impression of sporadic and inconsistent effects.

Finally, as a robustness check, we estimated all across-time effects on the dependent variables within the control condition only ($N = 1220$). These analyses, shown in Table SOM 3-4 below, replicated the effects observed in the full sample (reported in Table 2 of the main text).

Table SOM 3-4

Restricted sample (control condition) variable descriptives as a function of time (sample): estimated M (adjusting for demographics & experimental condition) and SE

	2017 wave	2019 wave	2020 wave	2021 wave	2025 wave	$F_{(4,1206)}$	p	η_p^2
PPPC	4.62 _{ab} (.19)	4.56 _a (.08)	4.39 _{ab} (.05)	4.49 _a (.05)	4.24 _{ab} (.06)	4.03	.003	.013
ID	4.54 _a (.28)	4.68 _a (.11)	4.69 _a (.08)	4.93 _a (.08)	5.41 _b (.08)	12.08	<.001	.039
PE	3.15 _{ab} (.17)	3.16 _{ab} (.07)	3.09 _a (.05)	3.29 _{ab} (.05)	3.06 _a (.05)	3.07	.016	.010
NE	2.60 _{ab} (.17)	2.30 _a (.07)	2.23 _a (.05)	2.17 _a (.05)	2.65 _b (.05)	15.37	<.001	.048
GBSD	3.83 _{ab} (.24)	4.12 _{ab} (.09)	4.12 _a (.07)	4.38 _b (.07)	5.03 _c (.07)	28.10	<.001	.085
GBS	4.89 _{ab} (.24)	5.18 _a (.10)	5.22 _a (.07)	5.54 _{ab} (.07)	5.66 _c (.07)	8.17	<.001	.026
CE	4.80 _{ab} (.24)	4.93 _a (.09)	4.96 _a (.07)	5.22 _{ab} (.07)	5.44 _{ab} (.07)	8.44	<.001	.027
PrID	5.20 _a (.20)	5.63 _{ab} (.08)	5.70 _{ab} (.06)	5.83 _b (.06)	5.83 _b (.06)	3.44	.008	.011

Note. Means with different subscripts differ significantly at $p \leq .05$, Bonferroni corrected.

PPPC = Perceived possibility of progressive (social) change, ID = Identification, PE = Positive emotion, NE = Negative emotion, GBSD = group-based self-definition, GBS = group-based satisfaction, CE = collective efficacy, PrID = preserve identity

Overall, the above analyses suggest that the across-time patterns we observe are not easily attributable to experimental effects. Nonetheless, because there were some slight differences between the outgroup change condition and the alternative two conditions, which could be contributing to observed effects on certain variables (i.e., emotional responses), we control for conditions in all analyses reported in the main text.

SOM #4: Analytic code

Create Variables (SPSS)

COMPUTE PerceivedChange4Reversed=8-PerceivedChange4.

EXECUTE.

COMPUTE

PerceivedPossibilityProgressiveChange=mean(PerceivedChange1,PerceivedChange2,PerceivedChange3,
PerceivedChange4Reversed).

EXECUTE.

COMPUTE IdentificationTotal=mean(Ident1,Ident2,Ident3,Ident4,Ident5,Ident6).

EXECUTE.

COMPUTE PostitiveEmotions=mean(Hope,Inspiration,Affirmation,Security,Comfort,Contentment).

EXECUTE.

COMPUTE NegativeEmotions=mean(Sadness,Uncertainty,Apprehension,Regret,Concern,Worry).

EXECUTE.

COMPUTE

GroupSelfDefinition=mean(SelfDefinition1,SelfDefinition2,SelfDefinition3,SelfDefinition4).

EXECUTE.

COMPUTE GroupSatisfaction=mean(GroupAffect1,GroupAffect2,GroupAffect3,GroupAffect4).

EXECUTE.

COMPUTE CollectiveEfficacyTotal=mean(CollectiveEfficacy1,CollectiveEfficacy2,CollectiveEfficacy3,
CollectiveEfficacy4,CollectiveEfficacy5).

EXECUTE.

```
COMPUTE PreserveIdentity=mean(Preserve1,Preserve2).
```

```
EXECUTE.
```

```
COMPUTE RelinquishIdentity=mean(Relinquish1,Relinquish2,Relinquish3).
```

```
EXECUTE.
```

```
RECODE Condition (1=-1) (2=1) (3=0) INTO IngroupVControl.
```

```
EXECUTE.
```

```
RECODE Condition (1=-1) (2=0) (3=1) INTO OutgroupVControl.
```

```
EXECUTE.
```

```
*** remove participants who are located outside North America/ Western Europe/ Australia and  
participants who either did not confirm their identity or who identified themselves as heterosexual,  
"straight" or some variation thereof ***
```

```
USE ALL.
```

```
COMPUTE filter_$(WestVOther = 1 & Label_commonscoring ne 0 & Label_commonscoring ne 1).
```

```
VARIABLE LABELS filter_$ 'WestVOther = 1 & Label_commonscoring ne 0 & Label_commonscoring  
ne 1 '+'
```

```
'(FILTER)'.
```

```
VALUE LABELS filter_$ 0 'Not Selected' 1 'Selected'.
```

```
FORMATS filter_$ (f1.0).
```

```
FILTER BY filter_$.
```

```
EXECUTE.
```

```
_SLINE OFF.
```

```
***Across-Time patterns across variables (SPSS)***
```

GLM PerceivedPossibilityProgressiveChange IdentificationTotal PostitiveEmotions NegativeEmotions

GroupSelfDefinition GroupSatisfaction CollectiveEfficacyTotal PreserveIdentity BY Sample WITH age

WhiteVOther USResident CISMaleVOther IngroupVControl OutgroupVControl

/METHOD=SSTYPE(3)

/INTERCEPT=INCLUDE

/EMMEANS=TABLES(Sample) WITH(age=MEAN WhiteVOther=MEAN USResident=MEAN CISMaleVOther=MEAN

IngroupVControl=MEAN OutgroupVControl=MEAN) COMPARE ADJ(BONFERRONI)

/PRINT=ETASQ

/CRITERIA=ALPHA(.05)

/DESIGN=age WhiteVOther USResident CISMaleVOther IngroupVControl OutgroupVControl Sample.

Correlations among variables independent of time (jamovi)

jmv::corrPart(

data = data,

vars = vars(PerceivedPossibilityProgressiveChange, IdentificationTotal, PostitiveEmotions, NegativeEmotions, GroupSelfDefinition, GroupSatisfaction, CollectiveEfficacyTotal, PreserveIdentity),

controls = vars(age, CISMaleVOther, WhiteVOther, USResident, Sample))

*** Direct effects model (jamovi)***

pathj::pathj(

formula = list("PostitiveAffect ~ age + WhiteVOther + USResident + CISMaleVOther + IngroupVControl + OutgroupVControl + Sample", "NegativeAffect ~ age + WhiteVOther + USResident + CISMaleVOther + IngroupVControl + OutgroupVControl + Sample", "SelfDefinitionTotal ~ age + WhiteVOther + USResident + CISMaleVOther + IngroupVControl + OutgroupVControl + Sample", "GroupAffectTotal ~ age + WhiteVOther + USResident + CISMaleVOther + IngroupVControl + OutgroupVControl + Sample", "CollectiveEfficacyTotal ~ age + WhiteVOther + USResident + CISMaleVOther + IngroupVControl + OutgroupVControl + Sample", "PreserveIdentity ~ age + WhiteVOther + USResident + CISMaleVOther + IngroupVControl + OutgroupVControl + Sample"),

```
data = data,
r2test = TRUE,
contrasts=c(Sample = "repeated"),
diagram = TRUE,
diag_paths = "stand")
```

Note: coefficients associated with time contrasts produced by the above model were reversed prior to reporting in text, figures & tables to aid readability/ comprehension: In the original output, negative (positive) coefficients represent increases (decreases) over time; in text, figures & tables, negative coefficients represent decreases over time and positive coefficients indicate increases. Non-time-related coefficients remain unchanged

***Indirect effects via path model (jamovi) ***

```
pathj::pathj(
```

```
  formula = list("PerceivedPossibilityProgressiveChange ~ Sample + age + WhiteVOther + USResident + CISMaleVOther + IngroupVControl + OutgroupVControl", "IdentificationTotal ~ Sample + PerceivedPossibilityProgressiveChange + age + WhiteVOther + USResident + CISMaleVOther + IngroupVControl + OutgroupVControl", "PositiveEmotions ~ PerceivedPossibilityProgressiveChange + IdentificationTotal + age + WhiteVOther + USResident + CISMaleVOther + IngroupVControl + OutgroupVControl", "NegativeEmotions ~ PerceivedPossibilityProgressiveChange + IdentificationTotal + age + WhiteVOther + USResident + CISMaleVOther + IngroupVControl + OutgroupVControl", "GroupSelfDefinition ~ PerceivedPossibilityProgressiveChange + IdentificationTotal + age + WhiteVOther + USResident + CISMaleVOther + IngroupVControl + OutgroupVControl", "GroupSatisfaction ~ PerceivedPossibilityProgressiveChange + IdentificationTotal + age + WhiteVOther + USResident + CISMaleVOther + IngroupVControl + OutgroupVControl", "CollectiveEfficacyTotal ~ PerceivedPossibilityProgressiveChange + IdentificationTotal + age + WhiteVOther + USResident + CISMaleVOther + IngroupVControl + OutgroupVControl", "PreserveIdentity ~ PerceivedPossibilityProgressiveChange + IdentificationTotal + age + WhiteVOther + USResident + CISMaleVOther + IngroupVControl + OutgroupVControl"),
```

```
data = data,
r2test = TRUE,
indirect = TRUE,
contrasts=c(Sample = "repeated"),
diagram = TRUE)
```

Note: coefficients associated with time contrasts and time-driven indirect effects produced by the above model were reversed prior to reporting in text, figures & tables to aid readability/ comprehension: In the original output, negative (positive) coefficients represent increases (decreases) over time; in text, figures & tables, negative coefficients represent decreases over time and positive coefficients indicate increases. Non-time-related coefficients remain unchanged

SOM #5: Correlation matrices at each time point

PPPC = Perceived possibility of progressive (social) change

ID = Identification

PE = Positive emotion

NE = Negative emotion

GBSD = group-based self-definition

GBS = group-based satisfaction

CE = collective efficacy

PrID = preserve identity

*** $p < .001$, ** $p < .01$, * $p < .05$

2017

	PPPC	ID	PE	NE	GBSD	GBS	CE
ID	-0.36***	—					
PE	0.22**	0.36***	—				
NE	-0.43***	0.24**	-0.20**	—			
GBSD	-0.07	0.51***	0.34***	0.02	—		
GBS	-0.13	0.73***	0.52***	0.07	0.52***	—	
CE	0.13	0.46***	0.50***	-0.12	0.45***	0.65***	—
PrID	-0.25***	0.52***	0.28***	0.18*	0.21**	0.47***	0.35***

2019

	PPPC	ID	PE	NE	GBSD	GBS	CE
ID	-.18***	—					
PE	.28***	.27***	—				

NE	-.36***	.22***	-.27***	—			
GBSD	-.01	.54***	.28***	-.01	—		
GBS	-.08	.75***	.42***	.02	.58***	—	
CE	.02	.49***	.37***	-.09*	.47***	.67***	—
PrID	-.11*	.49***	.25***	.13**	.29***	.49***	.40***

2020

	PPPC	ID	PE	NE	GBSD	GBS	CE
ID	-.13***	—					
PE	.38***	.22***	—				
NE	-.33***	.11***	-.16***	—			
GBSD	-.06	.56***	.27***	-.01	—		
GBS	-.02	.74***	.32***	.02	.55***	—	
CE	.14***	.44***	.35***	-.05	.45***	.62***	—
PrID	-.15***	.45***	.08*	.17***	.26***	.43***	.35***

2021

	PPPC	ID	PE	NE	GBSD	GBS	CE
ID	-.11***	—					
PE	.36***	.21***	—				
NE	-.37***	.15***	-.24***	—			
GBSD	.06	.57***	.22***	.00	—		
GBS	-.01	.76***	.31***	.01	.57***	—	
CE	.06	.48***	.33***	-.05	.44***	.64***	—
PrID	-.09**	.44***	.13*	.08*	.28***	.48***	.41***

2025

	PPPC	ID	PE	NE	GBSD	GBS	CE
ID	.01	—					
PE	.56***	.28***	—				
NE	-.43***	.15***	-.29***	—			
GBSD	.23***	.67***	.42***	-.03	—		
GBS	.06	.77***	.30***	.01	.63***	—	
CE	.16***	.58***	.34***	-.10**	.59***	.72***	—
PrID	-.15***	.43***	.01	.15***	.26***	.51***	.46***

SOM#6: Parameter Estimates for Sequential Mediation Model

Parameter Estimates								
				95% Confidence Intervals				
Dep	Pred	Estimate	SE	Lower	Upper	β	z	p
PerceivedChangeTotal	age	5.85e-4	0.00157	-0.00248	0.00365	0.00664	0.3739	0.7084855411646691
PerceivedChangeTotal	USResident	0.20894	0.14869	-0.08249	0.50038	0.03865	1.4052	0.1599651223716774
PerceivedChangeTotal	WhiteVOther	0.11797	0.03507	0.04925	0.18670	0.05619	3.3644	0.0007671616963383
PerceivedChangeTotal	CISMaleVOther	0.25487	0.03725	0.18186	0.32789	0.11431	6.8418	0.0000000000078209
PerceivedChangeTotal	IngroupVControl	-0.01108	0.02234	-0.05487	0.03271	-0.00942	-0.4959	0.6199771905972578
PerceivedChangeTotal	OutgroupVControl	0.02363	0.02233	-0.02015	0.06740	0.02010	1.0579	0.2900894139015777
PerceivedChangeTotal	2017-2019	-0.25207	0.12881	3.98e-4	-0.50454	-0.05662	-1.9569	0.0503626266251642
PerceivedChangeTotal	2019-2020	-0.15582	0.05238	-0.05315	-0.25848	-0.06284	-2.9747	0.0029324331123908
PerceivedChangeTotal	2020-2021	0.06410	0.04277	0.14792	-0.01972	0.03322	1.4988	0.1339234800714799
PerceivedChangeTotal	2021-2025	-0.19365	0.04584	-0.10381	-0.28349	-0.08906	-4.2248	0.0000239184339867

Parameter Estimates								
				95% Confidence Intervals				
Dep	Pred	Estimate	SE	Lower	Upper	β	z	p
IdentificationTotal	age	-0.00258	0.00226	-0.00701	0.00184	-0.01984	-1.1448	0.2523074287832423
IdentificationTotal	USResident	0.06110	0.21442	-0.35915	0.48135	0.00765	0.2850	0.7756779977770423
IdentificationTotal	WhiteVOther	0.03918	0.05063	-0.06005	0.13841	0.01263	0.7738	0.4390320258511400
IdentificationTotal	CISMaleVOther	-0.49225	0.05405	-0.59819	-0.38631	-0.14948	-9.1071	<.0000000000000001
IdentificationTotal	IngroupVControl	-0.00892	0.03221	-0.07206	0.05422	-0.00513	-0.2769	0.7818485538495561
IdentificationTotal	OutgroupVControl	-0.01487	0.03220	-0.07798	0.04824	-0.00856	-0.4619	0.6441594174680416
IdentificationTotal	2017-2019	0.21685	0.18580	0.58101	-0.14730	0.03298	1.1671	0.2431511635647188
IdentificationTotal	2019-2020	0.11481	0.07560	0.26299	-0.03338	0.03135	1.5185	0.1288846666053751
IdentificationTotal	2020-2021	0.06631	0.06167	0.18718	-0.05457	0.02327	1.0751	0.2823230287651044
IdentificationTotal	2021-2025	0.55417	0.06624	0.68400	0.42434	0.17256	8.3657	<.0000000000000001
IdentificationTotal	PerceivedChangeTotal	-0.12753	0.02400	-0.17457	-0.08049	-0.08635	-5.3136	0.0000001074719258

Parameter Estimates								
				95% Confidence Intervals				
Dep	Pred	Estimate	SE	Lower	Upper	β	z	p
PositiveAffect	age	9.99e-4	0.00112	-0.00119	0.00319	0.01283	0.8935	0.3715882715435455
PositiveAffect	USResident	-0.28457	0.06802	-0.41789	-0.15126	-0.05961	-4.1838	0.0000286678414572
PositiveAffect	WhiteVOther	-0.06358	0.02652	-0.11555	-0.01161	-0.03429	-2.3977	0.0164967097800732
PositiveAffect	CISMaleVOther	0.02069	0.02858	-0.03532	0.07670	0.01051	0.7240	0.4690613321092296
PositiveAffect	IngroupVControl	0.09536	0.01698	0.06208	0.12864	0.09179	5.6163	0.0000000195138263
PositiveAffect	OutgroupVControl	-0.14338	0.01697	-0.17665	-0.11011	-0.13810	-8.4474	<.00000000000000001
PositiveAffect	PerceivedChangeTotal	0.40431	0.01265	0.37953	0.42910	0.45786	31.9695	<.00000000000000001
PositiveAffect	IdentificationTotal	0.17885	0.00861	0.16197	0.19574	0.29914	20.7623	<.00000000000000001
NegativeAffect	age	0.00589	0.00116	0.00362	0.00817	0.07809	5.0717	0.0000003943594244
NegativeAffect	USResident	-0.20533	0.07072	-0.34395	-0.06672	-0.04436	-2.9033	0.0036925755794432
NegativeAffect	WhiteVOther	-0.04641	0.02757	-0.10044	0.00763	-0.02581	-1.6832	0.0923431398530379
NegativeAffect	CISMaleVOther	-0.03352	0.02971	-0.09176	0.02472	-0.01756	-1.1280	0.2593398139459515

Parameter Estimates								
				95% Confidence Intervals				
Dep	Pred	Estimate	SE	Lower	Upper	β	z	p
NegativeAffect	IngroupVControl	0.00261	0.01766	-0.03199	0.03721	0.00259	0.1478	0.8824907655874616
NegativeAffect	OutgroupVControl	-0.04904	0.01765	-0.08363	-0.01445	-0.04871	-2.7786	0.0054585768834479
NegativeAffect	PerceivedChangeTotal	-0.31264	0.01315	-0.33841	-0.28686	-0.36513	-23.7745	<.00000000000000001
NegativeAffect	IdentificationTotal	0.07444	0.00896	0.05689	0.09200	0.12841	8.3109	<.00000000000000001
SelfDefinitionTotal	age	0.00361	0.00149	6.88e-4	0.00653	0.03183	2.4213	0.0154659706972287
SelfDefinitionTotal	USResident	0.40128	0.09075	0.22340	0.57915	0.05768	4.4217	0.0000097947706139
SelfDefinitionTotal	WhiteVOther	-0.13353	0.03538	-0.20287	-0.06419	-0.04942	-3.7743	0.0001604375547370
SelfDefinitionTotal	CISMaleVOther	0.08867	0.03813	0.01394	0.16340	0.03090	2.3256	0.0200425525406671
SelfDefinitionTotal	IngroupVControl	-0.03061	0.02266	-0.07502	0.01379	-0.02022	-1.3512	0.1766246465022769
SelfDefinitionTotal	OutgroupVControl	0.01863	0.02265	-0.02576	0.06301	0.01231	0.8225	0.4107686245082995
SelfDefinitionTotal	PerceivedChangeTotal	0.18212	0.01687	0.14904	0.21519	0.14150	10.7927	<.00000000000000001
SelfDefinitionTotal	IdentificationTotal	0.54409	0.01149	0.52157	0.56662	0.62438	47.3393	<.00000000000000001

Parameter Estimates								
				95% Confidence Intervals				
Dep	Pred	Estimate	SE	Lower	Upper	β	z	p
GroupAffectTotal	age	-0.00272	0.00119	-0.00504	-3.91e-4	-0.02509	-2.2892	0.0220689682505928
GroupAffectTotal	USResident	0.05159	0.07222	-0.08997	0.19314	0.00777	0.7143	0.4750572868482230
GroupAffectTotal	WhiteVOther	0.01417	0.02815	-0.04101	0.06935	0.00549	0.5033	0.6147813947306475
GroupAffectTotal	CISMaleVOther	-0.12945	0.03034	-0.18892	-0.06998	-0.04727	-4.2663	0.0000198707040895
GroupAffectTotal	IngroupVControl	0.01825	0.01803	-0.01708	0.05359	0.01263	1.0124	0.3113264757952177
GroupAffectTotal	OutgroupVControl	0.00474	0.01802	-0.03058	0.04006	0.00328	0.2631	0.7924777734591673
GroupAffectTotal	PerceivedChangeTotal	0.09427	0.01343	0.06795	0.12059	0.07676	7.0202	0.0000000000022160
GroupAffectTotal	IdentificationTotal	0.63145	0.00915	0.61352	0.64938	0.75936	69.0369	<.0000000000000001
CollectiveEfficacyTotal	age	9.49e-5	0.00151	-0.00287	0.00306	8.98e-4	0.0627	0.9500423081182172
CollectiveEfficacyTotal	USResident	0.15148	0.09213	-0.02909	0.33206	0.02338	1.6442	0.1001366312866139
CollectiveEfficacyTotal	WhiteVOther	-0.14144	0.03592	-0.21183	-0.07105	-0.05620	-3.9381	0.0000821225598813

Parameter Estimates								
				95% Confidence Intervals				
Dep	Pred	Estimate	SE	Lower	Upper	β	z	p
CollectiveEfficacyTotal	CISMaleVOther	0.01367	0.03871	-0.06220	0.08954	0.00511	0.3532	0.7239706082274002
CollectiveEfficacyTotal	IngroupVControl	0.01027	0.02300	-0.03481	0.05535	0.00728	0.4465	0.6552607418532106
CollectiveEfficacyTotal	OutgroupVControl	0.03682	0.02299	-0.00824	0.08188	0.02612	1.6013	0.1093000792165746
CollectiveEfficacyTotal	PerceivedChangeTotal	0.19312	0.01713	0.15955	0.22670	0.16111	11.2737	<.0000000000000001
CollectiveEfficacyTotal	IdentificationTotal	0.42498	0.01167	0.40211	0.44785	0.52364	36.4220	<.0000000000000001
Preserveldentity	age	-0.00597	0.00141	-0.00873	-0.00321	-0.06324	-4.2336	0.0000229956177382
Preserveldentity	USResident	0.33143	0.08581	0.16324	0.49962	0.05725	3.8622	0.0001123590343521
Preserveldentity	WhiteVOther	0.01235	0.03345	-0.05321	0.07791	0.00549	0.3692	0.7119855052166233
Preserveldentity	CISMaleVOther	-0.11900	0.03605	-0.18967	-0.04834	-0.04984	-3.3007	0.0009643785175797
Preserveldentity	IngroupVControl	-9.52e-4	0.02142	-0.04294	0.04104	-7.55e-4	-0.0444	0.9645697950446539
Preserveldentity	OutgroupVControl	0.00607	0.02141	-0.03590	0.04804	0.00482	0.2834	0.7768636271378639

Parameter Estimates								
				95% Confidence Intervals				
Dep	Pred	Estimate	SE	Lower	Upper	β	z	p
Preserveldentit y	PerceivedChan geTotal	- 0.085 76	0.01 596	- 0.117 03	- 0.054 49	- 0.080 09	- 5.37 51	0.0000000765 211818
Preserveldentit y	IdentificationT otal	0.313 36	0.01 087	0.292 06	0.334 66	0.432 20	28.8 336	<.0000000000 000001

Note: Coefficients associated with time contrasts produced by jamovi were reversed prior to reporting to aid readability/ comprehension. In the original output, negative (positive) coefficients represent increases (decreases) over time; In the above table negative coefficients represent decreases over time and positive coefficients indicate increases. Non-time-related coefficients remain unchanged.